Improving Maple Sap Quality, Efficiency, Production and Profitability Through Collection and Processing Enhancements

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The Need: The demand for maple syrup and related products and the number of producers continue to increase. Commercial and entry-level producers are demanding improved methods for efficiency and production. Previous research and corresponding extension programming has addressed 5/16" tubing system design and tap hole sanitation, value-added products from high value sap and syrup, energy efficiency through reverse osmosis, and sugarbush management. This new research will build upon these topics to investigate smaller diameter tubing systems and natural vacuum, value-added products from low-quality sap and syrup, home-made versus commercial reverse osmosis systems, and quantifiable changes in maple tree growth and yield following thinning.

The Approach: The Cornell Maple Program worked closely with an advisory committee of maple producers, Cornell Cooperative Extension educators, and association leaders to identify the highest priority research needs. Needs were identified based on opportunities to enhance existing practices or technologies and areas where needs have been previously unmet. The project focused on refining sap collection systems to increase projects and reduce costs; increasing profitability by making equipment more efficient and developing new products; and enhancing woodland sap production.

The Impacts: This project will increase maple syrup production in New York, thanks to enhancements in tubing systems, the addition of woodlands owners as sap producers and greater adoption of tap hole sanitation. The new technologies support commercial producers and can scale to benefit entry-level producers as well as backyard hobbyists. The research from this project also will be used to develop extension products and activities such as workshops, maple schools, bulletins, notebooks, webinars and extension educator training.

Related Information: Cornell Maple Program